

ABSTRACT

Metal-containing materials, as well as their preparation and use are disclosed. The metal-containing material can be, for example, an antimicrobial material, an anti-biofilm material, an antibacterial material, an anti-inflammatory material, an anti-fungal
5 material, an anti-viral material, an anti-cancer material, a pro-apoptosis material, anti-proliferative, MMP modulating material, an atomically disordered, crystalline material, and/or a nanocrystalline material. In certain embodiments, the metal-containing material is an atomically disordered, nanocrystalline silver-containing material.